

## **Water Pollution Control Advisory Council Briefing of the Upper Blackfoot Mining Complex Temporary Water Quality Standards**

### **Temporary Water Quality Standards Overview**

Temporary Water Quality Standards are authorized by a statute in the Montana Water Quality Act that was adopted by the Legislature in 1995 (§ 75-5-312, MCA). The purpose of the statute is to allow the Board to modify specific existing water quality standards for an impaired waterbody or stream reach. The statute limits the duration of the temporary water quality standards by requiring an implementation plan that will result in the petitioned waterbody meeting all its designated uses within 20 years.

The statute requires a support document that describes:

- 1) The site(s), chemical, biological and physical condition;
- 2) The specific water quality limiting parameters;
- 3) The water quality standards not being achieved; and
- 4) The existing uses and what uses would be attainable if standards were met.

In addition, the implementation plan must describe the proposed actions for attaining existing water quality standards and a schedule for those actions. The support document and implementation plan serve as the basis for the Board's adoption of temporary standards.

Each year the temporary standards are in effect a detailed work plan is required and must be approved by the director of DEQ. At least once every three years, DEQ reports to the Board regarding whether adequate efforts have been made to meet the schedule and actions in the implementation plan.

The statute also identifies conditions when the “board shall terminate a temporary standard for a parameter.”

Those conditions are:

- 1) The water quality has improved to the point where all designated uses are met;
- 2) The petitioned waterbody has been reclassified; or
- 3) The implementation plan is not being implemented according to the plan’s schedule.

### **History of the Upper Blackfoot Mining Complex (aka: Heddleston Mining District, UBMC)**

The streams that have temporary water quality standards in the UBMC are Mike Horse Creek, Beartrap Creek and the Blackfoot River. Other streams in the area are Anaconda Creek , Stevens Creek, Shave Creek and Paymaster Creek and the Mike Horse Tailings Impoundment and dam .

The UBMC is made up of several mines including but not limited to:

- The Anaconda, Carbonate, Mike Horse and Paymaster mines. The mines produced mostly silver and lead with sporadic activity from 1890s to 1960s.
  - Mike Horse Mine was the “flagship” and is one of the main sources of pollution impacting the area covered under the Temporary Water Quality Standards.
    - Included with the mine is a tailings impoundment located at the confluence of Mike Horse and Beartrap Creeks.
    - A 1975 breach of the tailings impoundment dam released approximately 200,000 cubic yards of metal-bearing tailings downstream.

**Pre-Temporary Water Quality Standards UBMC restoration activities:**

- After an environmental assessment on the area in 1991 by the Department of State Lands, the regulatory authority for the area was transferred (1991 legislative action) to the Department of Health and Environmental Sciences (MDHES) CECRA program.
- An August 1991 CERCLA preliminary assessment by MDHES summarized available information about site history and contamination.
- In February 1992, MDHES noticed Asarco and Arco as potentially liable persons (PLPs) for the facility and directed the parties to conduct a remedial investigation/feasibility study (RI/FS).
- In June 1993, MDHES performed a CERCLA site inspection to assess the threat posed to human health and the environment; determine the need for additional investigations under CERCLA, or other authorities; and support site evaluation using the Hazard Ranking System (HRS) for proposal to the National Priorities List (NPL). A final EPA decision regarding inclusion to the NPL is still pending.
- In September 1993, with agreement from the Director of MDHES, Asarco and Arco began a five-year voluntary interim removal action program at the UBMC. These voluntary interim removal actions in the 1990s attempted to address critical sources of contamination related to the various mines in the UBMC.
  - Removal actions included removing mine waste and placement into three constructed repositories, controlling adit discharge flow, constructing pretreatment ponds and wetlands for treatment of the adit discharge from the Anaconda and Mike Horse mines, and capping in-place the remaining mine waste.

## **Summary of Temporary Water Quality Standards Implementation Plan**

This is a summary and not intended to be comprehensive. The specifics have been described in annual reports and the triennial report to BER.

- Asarco petitioned the Board in 1999 to adopt temporary water quality standards for portions of Mike Horse Creek, Beartrap Creek and the Blackfoot River.
- The Board adopted temporary water quality standards for the UBMC in 2000 based upon an implementation plan that included:
  - A progressive series of site delineation/condition assessments and remedial actions to remove mine wastes from the floodplain.
  - Surface and ground water chemical monitoring of the petitioned streams and biological monitoring at a site near the downstream extent of the temporary standards.
  - Although the temporary standards do not apply to the tailings impoundment, several impoundment studies were identified to be conducted including:
    - Geotechnical stability evaluation of the dam
    - Design and construction of an emergency spillway
    - Dam seepage studies
    - Impoundment sediment sampling
  - The USFS and Asarco have signed an Administrative Order on Consent (AOC) but the AOC only covers the development of an engineering alternatives and cost study (Engineering Evaluation/Cost Analysis, EE/CA). Another AOC or modification of the one in place will be required to actually implement the removal actions on federal lands.

### **Actions Initiated or Completed**

Initial floodplain mine waste delineation and mapping in Beartrap Creek and the Blackfoot River have been completed.

- In 2004 Asarco began the first removal under the temporary standards at the Upper Mike Horse waste piles with completion expected in 2006.
- Annual water treatment system operation, maintenance, and enhancement.
- Annual work plans and monitoring reports.

### **Present situation**

- No one event or action is the cause of the slow progress and schedule deficiencies.
- Asarco has been continually late with its deliverables which may be due to a lack of funding. However, Asarco has not made requests from the DOJ trust fund to complete necessary work in the upcoming years. DOJ administers the trust fund and annual distributions for UBMC for the USFS, DEQ and Asarco have averaged \$360,000 per year.

- Concurrent actions by the department and the Forest Service that are not directly part of the Temporary Standards have complicated the planning and implementation of the Implementation Plan.
  - State Super Fund (i.e. CECRA) litigation
  - US FS AOC deliberations under CERCLA
  - Public concern regarding dam removal and safety issues as presented by the news media
- The Sale/purchase of Asarco by Grupo Mexico added an element of uncertainty to progress on the implementation plan, such as:
  - Possible change of corporate philosophy towards Temporary Standards
  - Poor financial condition
- Establishment of a Trust Fund administered by the Department of Justice (Washington DC) in response to Asarco's national environmental issues and Asarco's financial solvency questions.
  - National competition for limited funds.
- Asarco declares bankruptcy.

### **The situation in more detail**

**Issue:** Work at the UBMC under the Temporary Standards Implementation Plan is not meeting target dates outlined in the plan. Any future work on USFS land, specifically work within the Mike Horse, Beartrap, and Upper Blackfoot floodplains, as outlined in the plan will not meet targets.

- Asarco is not meeting the target dates and deadlines for:
  - 2005 Final Work Plan – the work plan for tasks performed annually at the UBMC under the Temporary Standards has not been submitted to DEQ for final approval.
  - Lower Mike Horse mine waste removal – the target date for completion of this task (predominantly on USFS land) is 2005. Asarco and the USFS were negotiating an AOC for this work prior to the filing of the Ch. 11 bankruptcy. Asarco and the USFS signed an action memo but removal work did not occur.

**Issue:** It is unlikely that cleanups targeted for USFS land can be completed under the Temporary Standards framework.

- The Chapter 11 bankruptcy filed by Asarco significantly impacts the way that future Asarco Trust Fund monies will be allocated for the UBMC.
  - Asarco, as one of two controlling entities for the UBMC Asarco Trust Fund, will only seek funding for work on its corporate holdings. The holdings include the Mike Horse Mine area (upper MH waste piles, adit-discharge pretreatment system, and repository), Anaconda adit-discharge treatment system, and the Paymaster and Carbonate repositories. This position is consistent with the Bankruptcy Trustee's position regarding Asarco's cleanup obligations nationwide.
  - The USFS is the other controlling entity for the Asarco Trust Fund and is now responsible for all work targeted on federal lands, which includes the Mike

Horse tailings impoundment, lower Mike Horse Creek waste piles, Beartrap Creek discrete and concentrated tailings, and the upper Blackfoot discrete and concentrated tailings and mine waste.

- Cleanup of mine waste and tailings on USFS land is not likely to meet the Temporary Standards Implementation Plan schedule.
  - The USFS, as indicated in its proposal for FY2006 Trust funding, has not targeted any cleanup in accordance with the Implementation Plan schedule. The work proposed for FY2006 includes completion of the EE/CA for the tailings impoundment and the discrete and concentrated tailings in the floodplains of Mike Horse Creek, Beartrap Creek, and the upper Blackfoot River. In addition, the Forest Service intends to prepare design bid documents for the tailings impoundment remedy and floodplain removal remedies. A temporary dam stabilization plan is also being drafted.
  - Asarco's FY2006 Trust funding request includes minimal modifications to the Paymaster repository. This is a significant change from the FY2005 plan that was postponed due to the Ch. 11 filing. The original plan included investigating the feasibility of an extensive westward expansion of the repository. The purpose of the expansion was to accommodate the waste removal actions in the lower Mike Horse, Beartrap, and upper Blackfoot floodplains – all located on USFS land.

#### **UBMC Litigation:**

Under CECRA, the state superfund statute, the Department is responsible for administering cleanup actions at the entire UBMC facility, not just contamination that would be addressed under the Water Quality Act. As a part of this process the department has filed litigation to

- Recover past costs.
- Ensure Asarco/Arco conducts an RI/FS including Human Health and Environmental Risk Assessments. This analysis would:
  - Investigate downstream contamination and evaluate cleanup of downstream contamination.
    - TMDL data indicates potential downstream risk to aquatic organisms from tailings – not currently (more data required) addressed.
    - A dissertation (2005) by Gregory Vandenberg suggests that metals from the UBMC may reach as far as 42 miles downstream from the headwaters confluence of Anaconda Creek and Beartrap Creek.
  - Evaluate the effectiveness of past Voluntary Interim Actions including the Mike Horse Repository (seeps at base), and the Anaconda Wetlands Passive System.
  - Determine risks to human health and the environment at the headwaters and contiguous lands.
- Recover Future Costs.

### **Asarco Trust Fund administered by EPA:**

- The Trust Fund is a result of a temporary settlement between the United States and Asarco.
- As required by the trust fund trustees, DEQ, USFS, and Asarco make separate annual requests for funding for the UBMC. Since its inception, the annual amount awarded has been approximately \$360,000.
- 2005 Trust allocation was impacted
  - \$70,000 of Asarco corporate matching funds were withdrawn
- Federal agencies (DOJ/EPA) are the controlling entities for non-corporate lands and have greater input to site-specific allocations
  - 90 sites in 22 states
  - Estimates range up to \$1 billion for Asarco cleanup liabilities
- Larger sites (Federal Superfund) nationwide will most likely get more from the Trust
  - Anticipate that more Trust funding will go to non-corporate sites that have elevated human health concerns
- The trust is due to sunset in 2010.

### **Possible Board actions and some possible consequences**

- No action, allow present Plan and Schedule to remain in effect
  - Unknown amount of work will be done and standards will expire 31 May 2008
  - Discharge permit for treatment system will need to be revised to meet WQB-7 standards after 2008
  - Federal and State Super Fund activities continue at own pace
  - Mike Horse Dam removal/reclamation proceeds at own pace
- Modify the Plan and Schedule to reflect proposed revisions and assurances by Asarco
  - Revision of Implementation Plan and schedule
  - Discharge permit for treatment system will be reissued with little or no modification
  - Federal and State Super Fund activities continue at own pace
  - Mike Horse Dam removal/reclamation proceeds at own pace
- Initiate rulemaking to rescind ARM 17.30.630(2).
  - Reissue discharge permit for treatment system to meet WQB-7 standards (B-1 Classification) with compliance schedule
  - Possible enforcement action
  - State and Federal Super Fund actions continue
  - Mike Horse Dam removal/reclamation proceeds at own pace